DAAD

Deutscher Akademischer Austauschdienst
German Academic Exchange Service

INTERNATIONAL PROGRAMMES

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Master's degree

Master of Science in Data Science
TU Dortmund University • Dortmund

Overview

Degree	Master of Science in Data Science
Teaching language	• English
Languages	All compulsory courses and a majority of the electives are taught in English. The programme can be studied entirely in English. However, if your language skills allow this, you are also allowed to choose courses taught in German. You do not need German language skills. However, since living in Germany gets easier when speaking at least some German, we recommend you to learn it. We organise basic German courses for all international students of our department.
Full-time / part-time	• full-time
Programme duration	4 semesters
Beginning	Winter and summer semester
Additional information on beginning, duration and mode of study	• If you do not manage to come to campus in time (e.g. because of a missing visa), you will not be excluded from the programme. However, most courses are taught in person, and the courses will not wait for you if you join late. You have to join in person for the exams at the latest. • The programme is free of admission. Hence, if you do not manage to join in time, you can apply again in a later semester and you are guaranteed to still be eligible and get a place. • The official programme duration is four semesters. However, international students should plan in at least one extra semester, since getting started in a new country and in a new programme will require some time.
Application deadline	For international applicants, the application periods are: • for starting in the summer semester from approx. 18 November to 15 January (cut-off period) • for starting in the winter semester from approx. 24 March to 15 July (cut-off period) Note that the starting dates are approximate dates, due to technical reasons the online portal may open a few days later. Applicants who completed their Bachelor's degree within Germany do not count as international applicants and, hence, other deadlines apply. For the IMPACT Programme, the application period is: 1 March 2024 to 31 May 2024

Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	The two-year Master's programme in Data Science is built on the Data Science BSc programme and can be started in either the summer or winter semester. It is a **joint project of the Departments of Statistics, Computer Science and Mathematics**. As the tasks are always and rapidly changing in this research field, the study programme provides a sound statistical and mathematical theory and teaches contemporary methods and knowledge. Hence, the students learn to be capable of doing scientific research. They develop a scientific awareness and can use it responsibly. The interdisciplinary ability to communicate about methods and their application, especially at the interface between Statistics, Computer Science, Mathematics and fields of application, is a key aspect of the study programme. Our programme builds on our six-semester Bachelor's in Data Science (taught in German). Many other MSc Data Science programmes dedicate their first semester to repeating important foundations in mathematics, statistics and computer science. As you are joined by the graduates from our Bachelor's programmes, we cannot dedicate an entire semester to repeat Bachelor's topics. Hence, we expect you to be on-point with your prior knowledge, and if you are not, we expect you to close the gaps by yourself. Then again, this means that we can dedicate more time of our actual study programme to specialised Master's courses. We have a focus on advanced statistics courses, in which we put great emphasis on development of the underlying statistical theory. **IMPACT Programme - Master's Preparation Programme (5 August to 27 September 2024)** The IMPACT Programme (International Master's Preparation and Cultural Transition Programme) is offered to best prepare students for the Master's degree programme in Data Science at TU Dortmund University and to allow students to benefit from a variety of academic and administrative support services. The courses are specifically designed to provide you with the skills and knowledge required to fulfil the stipulations and successfully complete your Master's degree programme in Data Science. For more information, please visit the IMPACT Programme website.

Course Details

Course organisation	This programme offers different core and elective modules. The modules can be chosen from a wide range of different courses according to the individual interests of the student. Through internships and project work courses as well as the Master's thesis, students have the opportunity to apply their knowledge. Based upon previous studies, the advanced courses cover statistical theory, statistical learning, big data, and the application of methods in chosen areas of study (case study, seminars and electives). A particular emphasis is placed on the development and application of efficient procedures for analysing very large amounts of data. » PDF Download
A Diploma supplement will be issued	Yes
International elements	• International guest lecturers

Integrated internships	The "Case Studies" subject from the "Project Work" module can be replaced with an external internship of at least six to eight weeks. However, this is not a must; you can finish the study programme without doing an internship.
Course-specific, integrated German language courses	Yes
Course-specific, integrated English language courses	No

Costs / Funding

Tuition fees per semester in EUR	None
Semester contribution	Approximately 350 EUR. Approx. 225 EUR are for the public transportation ticket, approx. 125 EUR are a social contribution to different organisations within TU Dortmund University. Details are listed here: https://www.tu-dortmund.de/en/students/during-your-studies/organization-of-studies/re-registration-and-semester-contribution/.
Costs of living	You should budget a minimum of 861 EUR per month for your living expenses. If you need a visa to come to Germany, this is the amount you must have available to you (e.g. paid into a blocked account) for each month. Nevertheless, your actual cost of living will vary depending on your lifestyle, and so you should treat this figure as an absolute minimum.
Funding opportunities within the university	No

Requirements / Registration

Academic admission requirements	You need a degree from our own six-semester Bachelor's programme in Data Science. Students who have completed a BSc programme in statistics, mathematics, computer science, or related fields can also be admitted for this Master's programme. You can find a detailed description of the admission criteria on this website: https://statistik.tu-dortmund.de/en/studies/degrees/data-science-msc/admission/. 1. Your Bachelor's programme must fit: It must contain relevant basics from the three fields computer science, mathematics and statistics. 2. Your final degree must be equivalent to at least the grade 5 (German system). 3. You must show sufficient English skills (at B2 level). We accept Language of Instruction certificates. 4. You must do our self assessment test and fill out our self disclosure document. Both of them are meant for you such that you can pre-assess whether you are a suitable candidate for our programme. We are neither interested in how good you score in the self test, nor in the details of your self disclosure (we will double-check all information ourselves). 5. You have to work on the statistic project published on our website and submit a report of 10 pages. Admission is based on the quality of the report.
Language requirements	Sufficient knowledge of English, which must correspond at least to level B2 of the Common European Framework of Reference (CEFR). We accept the following proofs:

	- German certificate of general higher education entrance qualification (English from fifth grade or from seventh grade up to the Abitur) - an internationally recognised language certificate - a certificate of graduation from an English-language school or an English-language course of study - comparable evidence Knowledge of German is not required.
Application deadline	For international applicants, the application periods are: - for starting in the summer semester from approx. 18 November to 15 January (cut-off period) - for starting in the winter semester from approx. 24 March to 15 July (cut-off period) Note that the starting dates are approximate dates, due to technical reasons the online portal may open a few days later. Applicants who completed their Bachelor's degree within Germany do not count as international applicants and, hence, other deadlines apply. For the IMPACT Programme, the application period is: 1 March 2024 to 31 May 2024
Submit application to	Please find more information on the application process and deadlines on the website of our International Office.

Services

Possibility of finding part-time employment	Professors at the participating departments are regularly looking for research assistants. For example, open positions as tutors for students of lower semester are often available. The participating departments periodically host events to enable their students to get in touch with companies. At job fairs, students regularly have the opportunity to meet professionals and find student jobs or internships outside of academics. As a future data scientists, it is quite easy to find a part-time employment outside of academics.
Accommodation	Accommodation is available through student services (http://www.stwdo.de) as well as through the International Office of TU Dortmund University (https://international.tu-dortmund.de/en/international-students/everyday-life/accommodation/), or on the private market. Rent for a single room in a student residence is approx. 180 to 300 EUR. We recommend that you look for an accommodation in due time, as the housing market in Dortmund is currently very tight. **IMPACT Programme – Master's Preparation Programme** The Accommodation Package of the IMPACT Programme (International Master's Preparation and Cultural Transition Programme) offers furnished accommodation without requiring students to search for accommodation for a long time.
Career advisory service	TU Dortmund university has a career service centre, which provides assistance with applications, recruiting, and starting a career. They also offer a wide range of advice and services. Please find more information here: https://www.tu-dortmund.de/en/transfer/career-service/.
Support for international	Welcome event

students and doctoral candidates	• Accompanying programme • Specialist counselling • Cultural and linguistic preparation
General services and support for international students and doctoral candidates	Every winter semester, we organise a "Getting Started" course in which we meet with all our new international students on a weekly basis. The course covers a wide range of different topics, from getting to know the campus and the library over getting to know our terms of studies up to getting to know each other and Dortmund. We cover technical aspects (e.g. how to study at TU Dortmund University), social aspects (regular meetings with coffee and cake) and cultural aspects (e.g. visiting the Christmas market). Additionally, we offer the **IMPACT Programme** for motivated international students who are particularly interested in preparing for their upcoming Master's degree programme in Data Science. Students benefit from fast integration through administrative support, social counselling, German courses, intercultural training and shared events and excursions.
Supervisor-student ratio	Two international student advisors are responsible for around 60 international students per year.

Data Science (MSc) at TU Dortmund University

Communicative – innovative – unique

» more: https://www.youtube.com/watch?v=QNkmStNYkyc

TU Dortmund University

View of the Math Tower

© TU Dortmund University

A university with a unique profile: Since its founding in 1968, TU Dortmund University has developed a special profile encompassing 17 departments ranging from science and engineering to social sciences and cultural studies. The university has more than 32,000 students and 6,800 employees, including 300 professors.

TU Dortmund University has a strong focus on research. The university's departments, e.g. mechanical engineering (with its emphasis on production and logistics), physics, biochemical and chemical engineering, statistics and computer science, and education research, are well known for their outstanding research achievements both nationally and internationally.

Students at TU Dortmund University can choose from classical subjects and innovative courses of study such as medical physics or degree programmes in spatial planning, statistics, and journalism. A particular focus is on teacher training. TU Dortmund University is one of only a few universities in Germany that offers professional teaching qualifications for all types of schools.

⦿ University location

With around 6,800 employees, TU Dortmund University is one of Dortmund's largest employers and has helped drive the transformation of the city and the Ruhr region from Europe's largest coal mining and steel production area into a high-tech and service location as well as a cultural metropolis.

Dortmund is located in the heart of Europe. It is the largest city in the Ruhr region and is home to the Borussia Dortmund (BVB) soccer club. All of this contributes to the many advantages that will make studying in Dortmund an unforgettable experience. Apart from destinations for football fans, there are many other places of interest to discover in Dortmund and the Ruhr region.

Of particular importance for the development of the region is the University Alliance Ruhr (UA Ruhr), in which TU Dortmund University, the University of Duisburg-Essen, and Ruhr University Bochum joined forces more than a decade ago. Since the founding of the UA Ruhr, the Ruhr area has developed into one of the strongest science regions in Germany.

Contact

TU Dortmund University
Department of Statistics

Dr Daniel Horn

44227 Dortmund

✉ dhorn@statistik.tu-dortmund.de
🌐 Course website: https://statistik.tu-dortmund.de/en/studies/degrees/data-science-msc/

⊙ https://www.instagram.com/tu_dortmund/?hl=de

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International Programmes in Germany - Database

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